



Phylogeny of the family Clavariaceae

PhD thesis position

Laboratory Molecular Ecology and Metagenomics

Plant Science and Biodiversity Centre

Slovak Academy of Sciences

supervisor Mgr. Slavomír Adamčík, PhD.





Phylogeny of the family Clavariaceae

What they are?

- fungi (Agaricomycotina) forming clavaroid, coral-shaped or agaricoid fruiting bodies
- their trophic is unknown but they probably form an unspecified symbiosis with vascular plants
- the largest genera are *Clavaria*, *Clavulinopsis* and *Ramariopsis*
- they are known as CHEGD fungi, a dominant group of soil fungi in European grasslands

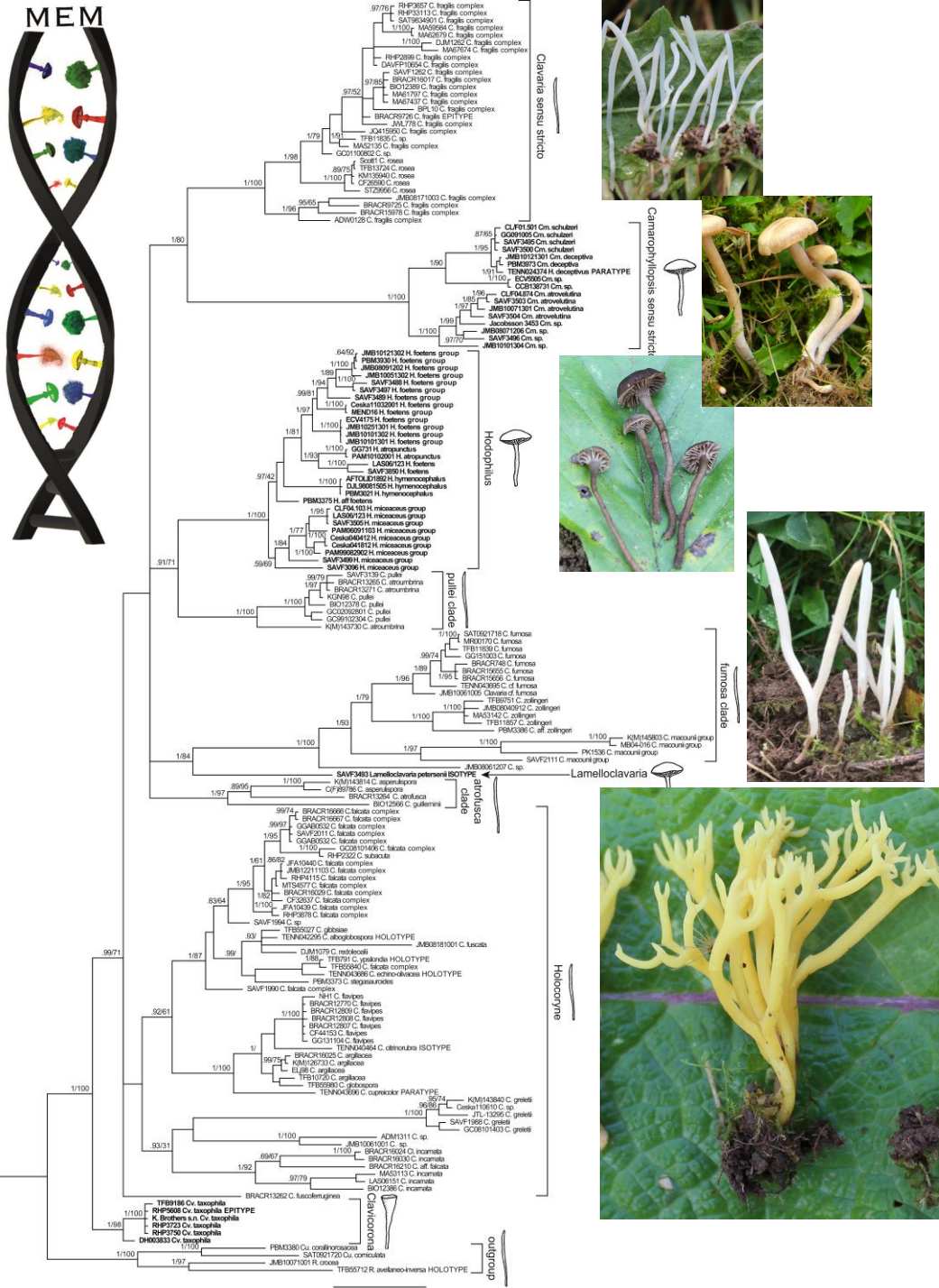




Phylogeny of the family Clavariaceae

What do we know about their phylogeny?

- Current phylogenetic studies recognised three well supported agaricoid lineages nested in a clavarioid lineage of morphologically defined genus *Clavaria*
- This clavarioid genus is not supported by phylogenetic analyses and is represented by very diverse club-shaped fungi of various morpho-anatomical structures
- The delimitation among *Clavulinopsis* and *Ramariopsis* is still defined based on morphological characters and the limits between these two genera are not clear





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Aims and methods

- to reconstruct the relationships among members of the family Clavariaceae based on phylogenetic study of multiple DNA loci
- morphologically define recognised genera and taxa on the lower ranks





Why to choose this topic ?

- MEM lab is well-equipped to cover all aspects of this topic and we have experience in this kind of studies
- Clavariaceae are important ecological indicators and important trophic group in grasslands making the topic applicable in practice
- This study will be linked to several projects providing funding and direct practical application
- Perspective to learn advanced lab methods (Sanger and ngs sequencing, phylogeny, bioinformatics, biomonitoring)
- We have foreign collaborations that open possibilities to study foreign
- And we are a good team





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What do we expect of an applicant ?

- Working enthusiasm, creativity, initiative, independence
- Initial level of fungal biology and molecular genetics knowledge
- Willingness to work in field conditions (driving licence welcome)
- Any other skills in biostatistics, soil biology, microbiology, ecology and conservation are welcome

